In the Matter of:) Doc	ket 03-IEP-01
Informational Proceeding and) Aging Pow	er Plant Study
•) Aging Fow	er Flam Study
Preparation of the 2004 Integrated)	
Energy Policy Report (IEPR) Update)	
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Comments of Reliant Energy, Inc.
on the California Energy Commission's
Draft Staff White Paper
"RESOURCE, RELIABILITY AND ENVIRONMENTAL CONCERNS OF
AGING POWER PLANT OPERATIONS AND RETIREMENTS"

I. Executive Summary

Reliant Energy, Inc. ("Reliant") applauds the California Energy Commission ("CEC") in its efforts to provide a critical assessment of Aging Power Plants in California and are in agreement with many of the draft report findings.

In its Report, the CEC has concluded that aging power plants provide value and reliability benefits, without materially or adversely affecting the environment, as compared to state-of-the-art combined cycle generation technologies¹. The CEC has found in many instances that aging power plants are required to maintain local area and regional reliability of California's electric system². And although required to maintain electric system reliability, the CEC has also found that owners' decisions related to the retirement of aging power plants are largely affected by disincentives inherent in the CAISO's existing market design, including the Must-Offer Waiver Denial process, the RMR selection process, the inability to contract output from the aging fleet³ and the lack of CPUC rules obligating LSEs to satisfy resource adequacy requirements⁴. Although the CEC believes that the electric capacity lost by aging power plant retirements can be

¹ Resource, Reliability and Environmental Concerns of Aging Power Plant Operations and Retirements – Draft Staff White Paper, (California Energy Commission, August 2004), p.4.

² Id, pp. 3.

³ Id, p. 30.

⁴ Id, p. 52.

replaced by several alternative sources⁵, an insignificant few of these alternatives can be deployed within the 2004-2008 timeframe on a megawatt scale equivalent to the size of aging plants that are subject to high or medium risk of economic retirement and in the locations required to maintain local area reliability with equivalent flexibility of capacity commitment and energy dispatch, and at an all-in equivalent cost. Accordingly, the CEC's policies should advocate necessary changes to the CAISO's existing market design that should be implemented now, without waiting until 2007, to align with the CEC's policy to maintain the valuable capacity provided by the aging power plant fleet and to encourage the timely improvement, or addition, of needed transmission and generation projects. These changes are discussed further in Section II of these comments.

In addition, Reliant discusses several additional aspects of the CEC draft report in Section III. Reliant explains that

- Emission comparisons between the Aging Power Plants and new combined cycle technology should also recognize the unique loadfollowing capability exhibited by many of the Aging Power Plants;
- The role of older combustion turbines in meeting peak energy demand should be further investigated and more fully explained in the Aging Power Plant draft report or in any follow-on study; and
- A reliable supply of electricity requires a balance of local generation and import capability – neither is as reliable as a combination of the two.

II. Necessary changes to CAISO Market Design to Encourage Continued Economic Viability of Aging Power Plants

A. Must-Offer Waiver Denial

The current Must-Offer Waiver Denial ("MOWD") process fails to compensate resources for the provision of required capacity. Upcoming

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⁵ Id, pp. 57-62.

Phase 1B changes threaten to make the existing MOWD process even less compensatory. As a starting point, the proposed Phase 1B changes that reduce compensation for MOWD units should not be implemented. Further, steps must be taken to ensure that generating units that are subject to the MOWD process receive adequate compensation for the capacity being provided.

Finally, the CEC should advocate use of Short-Term Reliability contracts as an interim measure, until more comprehensive market design changes are implemented, to assure the availability of resources and to compensate suppliers for the value of electric capacity not received under the CAISO's current MOWD process. These short-term contracts are not only permissible under the existing CAISO tariff⁶, but also present a means of addressing grid reliability problems sooner rather than later.

B. RMR Selection Criteria

A current discrepancy exists between generating units that have been identified as being needed for local reliability and units that actually receive RMR contracts. The discrepancy is attributable to differences that exist between the Local Area Reliability ("LARS" process used to identify required Regulatory Must Run ("RMR") units and actual operating criteria that determine which units are actually used to satisfy local reliability problems. The CAISO should take immediate action to reconcile this dangerous inconsistency by, at a minimum, amending its LARS selection criteria to align with the reality of grid reliability requirements; no matter

⁶ CAISO Tariff; §2,3,5:

[&]quot;2.3.5 Assurance of Adequate Generation and Transmission to meet Applicable Operating and Planning Reserve.

^{2.3.5.1} Generation Planning Reserve Criteria. Generation planning reserve criteria shall be met as follows:

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^{2.3.5.1.5} Notwithstanding the foregoing, if the ISO concludes that it may be unable to comply with the Applicable Reliability Criteria, the ISO shall, acting in accordance with Good Utility Practice, take such steps as it considers to be necessary to ensure compliance, including the negotiation of contracts through processes other than competitive solicitations."

how unpopular or at the risk of receiving complaints that "it is designating too many resources as RMR". Reliability should come first at the CAISO and the current MOWD process should be replaced with a meaningful program of contracting the resources required for local reliability. This is not a difficult and time-consuming process as was most recently demonstrated by the CAISO and SCE jointly identifying a list of generating facilities required for grid reliability, in an Advice Letter filed with the CPUC on July 26, 2004, subsequent to a July 8 CPUC decision that required a near-term solution to SCE's infeasible scheduling and local area reliability problems. There is no valid reason for delaying the implementation of a meaningful program of contracting reliability resources now.

C. Condition 2 RMR Commitment And Dispatch

The CAISO practice of replacing Day-Ahead Ancillary Service market-based bids with mandatory Condition 2 RMR unit capacity, at its discretion, should be terminated. Such interference not only damages the economic viability of existing non-RMR resources, including aging power plants, but also provides a clear disincentive for entry of new resources into Ancillary Service markets. The CAISO should only utilize RMR capacity as and when required to maintain grid reliability (as plainly stated in Section 5.2.1 of the CAISO's Tariff).

D. <u>Hardwired Mitigation Procedures</u>

The current energy price mitigation procedures are inconsistent with the current market design in that the mitigation procedures are applied in the absence of a separate capacity market. These mitigation procedures dampen price signals and provide economic disincentives for both existing and potential new generation. If energy price mitigation procedures continue, a separate capacity market must be implemented in order to maintain the peaking fleet, including several of the plants identified in the CEC's aging power plant fleet. In addition, the existing mitigation

procedures utilize a fixed mitigation price (\$91.87/Mwh). This mitigation process occurs asynchronous to changes in the price of the underlying commodities (e.g., natural gas). In addition, if energy prices exceed the mitigation price in any location in the state, bid prices are immediately reduced statewide to existing reference bids even though the problem may only be of a local nature. These hardwired mitigation procedures are outdated and should be revisited.

E. Ineffective Commitment To Resource Adequacy

Current proposed resource adequacy measures only require a fractional compliance showing of contracted capacity (i.e., contracting only 90% of resources required to satisfy the forecasted summer load plus 15-17% planning reserve margin). This fails to achieve resource adequacy, as there is no assurance that remaining needs will be met, even under best efforts applied by the CAISO to make-up the difference in the intervening months. Further, the 90% compliance showings will occur only 7 months ahead of the start of the summer season (i.e., a September 30, 2007 showing occurs only 7 months ahead of the May-September 2008 summer season). If a shortage is identified during this seven-month period, there will be insufficient time to develop or restore capacity, or implement curtailable demand. In contrast, an effective resource adequacy program would (1) auction 100% of the capacity required to satisfy the total forecasted amount of load plus planning reserve margin of 15-17% sufficiently far in advance of the intended delivery period to allow time for entry of new resources, (2) be completely transparent and competitive with market prices published publicly for all capacity required to fulfill resource adequacy obligations, and (3) standardize the capacity product so that it can be freely traded in the market.

F. Competitive Procurement Of Resources

If LSE resource procurement is conducted in a fashion that allows LSEs to

favor their own resources, an unlevel playing field will have been created that provides further economic disincentives to both existing and potential new resources. Regulations should be implemented to ensure that LSE resource procurement is conducted in an arms-length and transparent process. This will allow all potential load-serving resources to compete on an equal footing, and help ensure that California's consumers receive the best value for their energy dollar.

III. Additional Comments on the CEC's Draft Report

A. Emissions Comparisons of Aging Power Plants versus New Technology The draft report makes the valid point that, "[e]missions data from the U.S. EPA show that retrofitted units have emission rates per therm of gas burned (lbs/Btu) essentially identical to those of newer combined-cycle plants." The report however states that, "...because of relative efficiencies, the data also show that aging boiler units produce about 10-15 percent more emissions per unit of generation (lbs/MWh) than their combined-cycle counterparts, when operated in typical load following mode."8 Reliant suggests that the report note that boiler plants, such as the subject plants in this study, typically operate differently across the load range than a comparable combined cycle plant. Some boiler plants can serve load at as low as 10 percent of their base capacity and be in compliance with air permits whereas a combined cycle plant often can only drop to about 70 percent of capacity and remain compliant with permit limits. If a combined cycle plant is required to follow load in the same manner currently required of the aging boiler plants, total air emissions may actually increase, regardless of technology efficiencies.

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⁷ Resource, Reliability, p.4.

⁸ Ibid.

B. Exclusion of Older Peaking Combustion Turbine Generators

In its report, the CEC has excluded from consideration older combustion peaking turbine generators. It states that, "...though these units have very high fuel use and emission rates,... their owners are less likely to retire these units due to their very low fixed and non-fuel variable costs (they are unmanned, for instance, requiring no operations staff). Therefore, the staff considers it unlikely that these types of units will retire in sufficient numbers to have significant adverse effects on reliability." Peliant would like to point out that this is not always the case as evidenced by Etiwanda unit 5, which was recently retired due to impending environmental regulation. Similarly, both Mandalay 3 and Ellwood are currently mothballed with significant major maintenance expenses waiting in the backlog. Unlike Etiwanda 3 & 4, there has been no party willing to contract the capacity in order to keep Mandalay 3 and Ellwood available. Where the staff concludes that this population of combustion turbine units is largely not at risk, Reliant submits that, in the absence of a robust and meaningful capacity market, these units are very much at risk of economic retirement.

C. <u>Balancing Transmission and Generation</u>

In Chapter 5, the report describes transmission upgrades as a means to reduce reliance on California's aging power plants by increasing the ability to import power from neighboring states and Mexico, and increasing the amount of energy that can be delivered to the major load centers in California. However, part of what currently challenges the reliability of electric supply now in the San Francisco Bay area and in Southern California is an over reliance on imported energy combined with the absence of an appropriate capacity market to insure the availability of peaking supply in the regions. The reliable supply of electricity in major

¹⁰ Id, p. 61.

⁹ Id, p.18.

metropolitan areas requires a balance of local generation and import capability. Neither is as reliable as the combination of the two and the report should say this.

D. Clarifying Point on SCR Installation

In the section entitled "SCR Installation", the draft report states that all 66 units under study are in full compliance with applicable air quality standards. 11 Additionally this same section reports, "[t]he generators stated that selective catalytic reduction installation costs are not a factor in decisions on whether to retire a unit."12 While Reliant does not currently foresee incremental emission requirements during the report period that would result in the retirement of its units, Reliant would like the report to clarify that additional emission requirements and associated expenditures beyond any existing regulation, or anticipated change in regulation, would likely be a factor in economic-based retirement decisions.

¹¹ Id, p.4. ¹² Ibid.